AMENDMENTS TO THE CLAIMS

<u>In the Claims</u>:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (currently amended) A imaging system, comprising:

a sensor having one or more receptors to generate digital output for an image, the one or more receptors ~~associated with~~ <u>having</u> a pitch parameter;

an image transfer medium having a diffraction-limited parameter adapted to the pitch parameter <u>such that the diffraction-limited parameter in an object field of view is approximately matched to a projected receptor pitch parameter in the object field of view</u>; and

an application program that employs the digital output to at least one of process the image, analyze <u>critical dimensions of a structure from</u> the image, store <u>the output of</u> the image <u>of the feature in a memory</u>, transmit the image, and display the image.

2. (Original) The system of claim 1, further comprising an excitation source including at least one of a light source, an ultraviolet source, an infrared source, a multi-photon source, a pulsed source, and an x-ray source.

3. (currently amended) The system of claim 2, the pulsed source is associated with a ~~component~~ <u>computer or trigger machine</u> to enable at least one of synchronous and asynchronous capture of the image.

4. (currently amended) The system of claim 1, further comprising a ~~component~~ <u>computer or trigger machine</u> to alter particle motion in order to capture the image, the ~~component~~ <u>computer or trigger machine</u> employing at least one of electrostatic force,

electromagnetic force, mechanical force, thermal energy, air pressure, and fluid pressure to alter particle motion.

5.   (Original) The system of claim 1, the application program is associated with an industrial control system.

6.   (Original) The system of claim 1, the application program is associated with a least one of a particle sizing application, a thin film application, a fluorescence application, a multi photon application, a biological analysis application, a semiconductor application, a machine vision application, and an image processing application.

7.   (Original) The system of claim 1, the application program performs at least one of a comparative analysis, an correlative analysis, a cause and effect analysis, a learning system analysis, and a parametric analysis to identify an object.

8.   (Original) The system of claim 1, at least one of the sensor, the image transfer medium, the image, and the application program installed on a mobile device.

9.   (Original) The system of claim 1, the mobile device is at least one of a handheld device, a notebook computer, a laptop, and a personal digital assistant.

10.   (Original) The system of claim 1, further comprising a display to present the image to a user, the display including at least one of a computer monitor, a CRT, an LCD display, a TV, an organic light emitting device display (OLED), a semi-conductor image display device, a head-mount display, a flexible display, a monocular display, a binocular display, a projection display, a retinal display, and a Head-Up display.

11.   (Original) The system of claim 1, the image is transferred across a network for analysis by at least one of a user and a computer.

12.   (Original) The system of claim 11, the network is at least one of a local area network, an Internet, an Intranet, and a wireless network.

13.   (currently amended) A digital image, comprising:

      at least one image pixel; and

      a storage medium to capture the image pixel,

      the pixel generated from a sensor having one or more receptors, the one or more receptors associated with a pitch parameter,

      the one or more receptors energized from an image transfer medium having a diffraction-limited ~~parameter correlated to the pitch parameter~~ <u>spot size in an object plane matched to about a projected pixel size in an object plane.</u>

14.   (currently amended) A machine vision system, comprising:

      an imaging system for collecting image data from a product or process, comprising:

          a sensor having one or more receptors to generate image data; and

          at least one image transfer device associated with the one or more receptors of the sensor, ~~the at least one image transfer device provides a mapping of receptor size to about a size of a diffraction limited parameter associate with the at least one image transfer device~~ <u>where the projected pixel have a size in the object plane approximately matched with diffraction-limited spot size of the image transfer device in the object plane</u> and

      a controller that receives the image data and employs the image data in connection with fabrication or control of the product or process.

15.   (Original) The machine vision system of claim 14, being employed in a semiconductor-based processing system.

16.   (Original) The machine vision system of claim 14, a fiber optic media for processing the image.